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EXPECTANCY-VALUE IN THE ENROLLMENT FACTOR OF AGRICULTURAL EDUCATION YOUTH

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EXPECTANCY-VALUE IN THE ENROLLMENT FACTORS OF AGRICULTURAL EDUCATION YOUTH

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in the
College of Agriculture, Food and Environment
at the University of Kentucky

By

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Lexington, Kentucky

Director: Dr. Stacy K. Vincent, Assisstant Professor

Lexington, Kentucky

2016

ABSTRACT OF THESIS

EXPECTANCY-VALUE IN THE ENROLLMENT FACTORS OF AGRICULTURAL EDUCATION YOUTH

This quantitative study considers the motivating factors for enrollment in secondary agricultural education courses from students whose home background is not from a farm. This study utilizes expectancy-value theory, and looks at students (n=211) from different agricultural backgrounds and the impact on their ability beliefs, expectancies for success, and usefulness, importance, and interest for enrollment in agricultural education courses. The results indicate that students who have no affiliation to a farm have the highest ability beliefs and expectancies for success towards agricultural education in relation to students who are from traditional agricultural backgrounds.

KEYWORDS: Expectancy-value, agricultural education, non-traditional

Morgan Schafbuch

December 12, 2016

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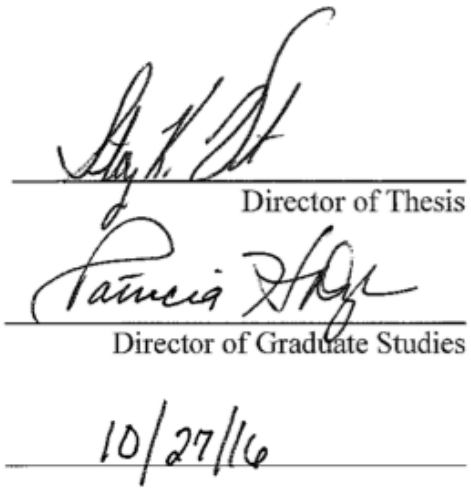

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INTRODUCTION

Background and Setting

Agricultural education experienced peak enrollments during the 1970s; however, the farm crisis of the 1980s led to a decline enrollment in FFA (previously called Future Farmers of America, now referred to as the National FFA Organization) student membership by up to 60% (Dyer & Osborne, 1994). While numbers in FFA and agricultural education enrollment have increased again, research has shown that numbers in agricultural education and FFA involvement are dependent on the perceived steadiness of the agriculture industry, the image of agriculture, and the student's perceived value of agricultural education (Breja & Dyer, 1999; Hoover & Scanlon, 1991). During the same time as the farm crisis of the 80s and dwindling numbers in FFA, "A Nation at Risk" (United States, 1983) called for students to take more academic based classes and did not place emphasis on career and technical education classes. In response, agricultural education professionals responded to "A Nation at Risk." The National Council for Agricultural Education was formed and as a result, course offerings in agriculture changed. New classes were offered such as Food Science, Animal Welfare, Environmental Science, and Aquaculture. Vocational agriculture was modified to a more scientific based agriculture, and as a result, enrollment numbers increased and FFA membership is at an all-time high (Case & Cloud, 2007).

At the turn of the 21st century, Igo and White (1999) anticipated the future image of a typical FFA member would be different than in the past. Igo and White went on to describe FFA members as more urban than rural, and few would have direct, production farming backgrounds, and as a result, it is expected that food production will need to be

dramatically increased by 2050 to feed the world's anticipated population (Godfray et al., 2010). Enrollment in agricultural education courses is rising; meanwhile, fewer children are being raised on farms (Retallick & Martin, 2008). A study conducted by Reis and Kahler (1997) focused on influencing factors of enrollment in agricultural education, but did not focus on traditional verse non-traditional agriculture students and their reasons for re-enrollment. Figure 1.1 shows an increase in FFA student membership from 2005-2014.

Figure 1.1
FFA Student Membership

	2005	**2010**	**2014**
Total Number of FFA Chapters in U.S., Puerto Rico, and Virgin Islands	7,242[1]	7,429[2]	7,757[3]
Total Student Membership	495,046[1]	520,284[2]	629,327[3]

[1]Data taken from https://www.ffa.org/sitecollectiondocuments/aged_annualreport.pdf
[2]Data taken from http://www.mde.k12.ms.us/TD/news/2011/10/17/national-ffa-2010-membership-breaks-all-time-record
[3]Data taken from https://www.ffa.org/ffa2015/Pages/National-FFA-Organization-membership-explodes-to-610,240-students.aspx

To understand why students would electively choose to take a course in agriculture, agricultural education can be more clearly explained. The modern day agricultural education classroom consists of three parts: 1) classroom instruction, 2) leadership development and career exploration opportunities, and 3) Supervised Agricultural Experience (SAE), which is practical application in real-world settings (Dailey, Conroy, & Shelley-Tolbert, 2001). According to Reis and Kahler (1997) "agricultural education remains one of the most widely praised secondary programs in the country" (p. 38). This can be due to the many opportunities available for students enrolled in agricultural education. Enrollment in agricultural education has many benefits for students (Brown, 2003). These benefits include increased student engagement and

retention, hands-on activities with knowledge application, adult mentorships, and learning transferrable skills to the workplace (Brown, 2003; Cohen & Besharov, 2002).

Need for the Study

This study will help answer why students who are from non-traditional agriculture backgrounds enroll in secondary agriculture courses. For the purpose of this study, non-traditional agriculture education students are students who either have no affiliation to a farm or have parents who own a farm, but do not live on one. A traditional agriculture student is defined as living or working on a farm. The mission of the National FFA Organization states, "FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education" (National FFA, 2016). The mission statement of the organization affiliated with agricultural education allows for a well-rounded educational experience that is not limited only to farm kids and allows for a plethora of opportunities for non-traditional agriculture students to find a place in agriculture.

Purpose of the Study

The purpose of this study is first, to determine the level of ability, expectancy, and interest, importance, and usefulness students with no affiliation to a farm find in agriculture courses when being compared against their peers from more traditional agriculture backgrounds. The study also determined what kept students enrolled and interested in agriculture and considered the values students place on elective agriculture courses and what students expected to get out of such courses.

Research Questions

The guiding research questions for this quantitative study were:

RQ1: What are the characteristics [sex, grade, affiliation to a farm (live on a farm, work on a farm, parents own a farm but do not live on one, no affiliation to a farm), and agriculture pathway] of the student participants?

RQ2: What are the ability beliefs of the student participants?

RQ3: What are the expectancies for success of the student participants

RQ4: What are the differences of usefulness, importance, and interest levels of the student participants?

RQ5: What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)?

RQ6: What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)?

RQ7: What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-tradional)?

Theoretical Framework

Expectancy-value theory is based on the concept that choice, persistence, and performance can be explained by an individual's beliefs about his or her competency and value towards a particular activity (Wigfield & Eccles, 2000). Wigfield and Eccles (2000) explain that the expectancies and values possessed by an individual directly impacts the performance, effort, and persistence he or she places on a goal. "Expectancies and values are assumed to be influenced by task-specific beliefs such as ability beliefs, the perceived difficulty of different tasks, and individuals' goals, self-schema, and affective memories"

(Wigfield & Eccles, 2000, p. 69). Expectancies and task values are the two main constructs that come together to form expectancy-value theory, a motivational theory that combines the values on a goal and the expectancies for success (Wigfield & Eccles, 2000).

There are four main constructs of task value that comprise this portion of the theory. The constructs are attainment value - the personal importance of doing well on a given task (Wigfield & Eccles, 2000), intrinsic value - the enjoyment or perceived enjoyment of a task (Wigfield & Eccles, 2000), and utility value – the usefulness of and how a task fits into an individual's plans for the future (Wigfield & Eccles, 2000). Of attainment value, intrinsic value, and utility value, utility value is the most extrinsic. Most likely, the individual will be committed to a particular task in the efforts of reaching a sought after ending, rather than for the sake of merely completing it (Wigfield & Eccles, 2000). Lastly there is perceived cost, which can be defined as an individual's evaluation of the emotional cost, perceived effort, and time constraints spent on the activity or task versus another activity (Wigfield & Eccles, 2000).

From the constructs of expectancy-value theory, two main questions are created. Expectancies formulate the question "Will I do well on this task?" (Eccles, 2009). Task value formulates "Why should I do this task?" (Eccles, 2009).

Definition of Terms

Agricultural Education – Modern day agricultural education is comprised of three dependent variables commonly known as 1) classroom instruction, 2) leadership activities, and 3) experiential learning (Dailey, Conroy, & Shelley-Tolbert, 2001).

Agriculture Pathway – A set of course offerings in a particular area which provide knowledge and skills pertaining to the specific career area, with seven total career pathways being related to agriculture (Slusher, Robinson, & Edwards, 2011).

Career and Technical Education – Set of courses which prepare students with college and career readiness, such as skills regarding job-specific, technical, and academic skills (ACTE, 2015).

FFA – In the three-circle model of agricultural education, the National FFA Organization (previously called Future Farmers of America, commonly known as FFA) is the leadership portion for secondary students enrolled in agriculture (Talbert & Balschweid, 2004). The National FFA organization lists the components of FFA as premier leadership, personal growth, and career success through engagement in FFA (National FFA Organization, 2016).

Non-traditional agriculture student – Any student not raised on a farm or has parents who own a farm, but the student does not live on one.

Rural – Rural "encompasses all population, housing, and territory not included within an urban area" (United States Census Bureau, 2015), and comprises areas of open country or settlements with less than 2,500 residents (USDA Economic Research Service, 2015).

SAE – A supervised agricultural experience provides experiential activities for students to learn more about agriculture and gain skills necessary for future agriculturally related careers (Moore & Flowers, 1993).

Traditional agriculture student – Any student living on- or working on a farm.

Urban – A densely populated area with designated space for residential, commercial, and recreational land use (United States Census Bureau, 2015), comprising of more than 2,500 residents (USDA Economic Research Service, 2015).

CHAPTER 2

REVIEW OF THE LITERATURE

A simple Google search of "why do we need agricultural education" led me to the following speech given in 2010 at the 83rd National FFA Convention by United States Secretary of Education Arne Duncan. His remarks regarding the importance of agricultural education include the following:

> "And finally, look behind me. You will see the outstanding students from the Chicago High School for the Agricultural Sciences who just introduced me. I've been to their school many times, and I loved those visits. It is an amazing school. I remember when a calf was born there. It is one of the ten largest FFA chapters in the nation. Every day, the Chicago Ag School refutes the myth that agricultural education is just for rural students. Every day, the school dispels the misconception that agricultural education is a relic with little relevance in the information age. Every day, their school illustrates the power of rigorous agricultural education to engage students and transform lives and communities. My message to you today is simple. We need you. Our nation needs your skills and talents to compete and prosper in the global economy…I am not sure if most Americans realize that agriculture is the biggest employer in the nation. Twenty-one million Americans, or 20 percent of the U.S. workforce, work in the agricultural sector. And the agricultural sector is growing despite the economic downturn. The math here is simple. For the U.S. economy to continue to rebound and grow, America's biggest employer has to help lead the way. That can only happen if FFA members—and all students in agricultural education—get a first-

rate education that genuinely prepares them for careers and college and readies them to compete in the global economy" (U.S. Department of Education, 2010).

The remarks given by Mr. Duncan describe the importance of agricultural education beyond rural communities and students raised in an agriculture setting. He also expresses how both rural and urban students alike have a large void to fill with the future of agriculture and the changing scope of production of food, fiber, and natural resources. The theory that frames the groundwork for this research is expectancy-value theory, which helps guide the answers to the question of why non-traditional agriculture students are interested in enrolling in agricultural education courses at the secondary level.

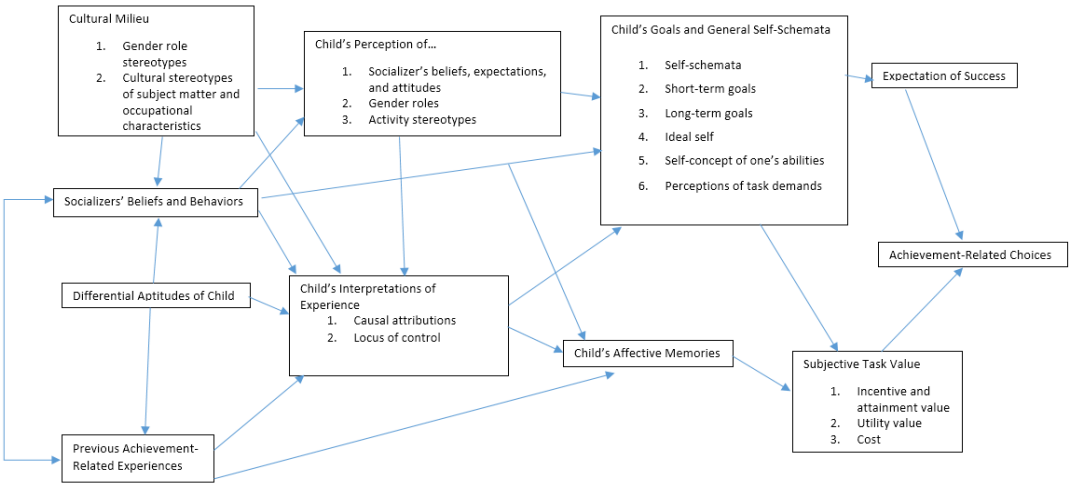
Theoretical Framework

Expectancy-value theory, a motivational theory that connects values placed on a goal and the expectancies for success, is formed by two main constructs - expectancies and task values (Wigfield & Eccles, 2000), which is comprised of choice, persistence, and performance (Wigfield & Eccles, 2000). The theory is explained by an individual's competency beliefs and his or her value towards a particular activity.

Figure 2.1, depicted below, shows the constructs of expectancy-value theory. The model describes the theory in a fashion that is based on a child's assumption about how well he or she will do on an upcoming task. This particular figure is from Eccles et al. (1983), which the researchers constructed in relation to expectancies and values. Figure 2.1 shows expectations and values are built on perceptions rather than on past success (Eccles et al. 1983).

Figure 2.1

Eccles, Wigfield, Adler, Futterman, Goff, Kaczala, Meece, Midgley's expectancy-value model of achievement motivation (1983)



This expectancy-value model of achievement motivation provides insight to the development of the theory. Two critical areas of the model are expectancies and subjective task values. Expectancies and task values lead to achievement choices. Expectancies for success are influenced by factors including both long and short-term goals; self-concept of ability; and gender role stereotypes. Task values, which include intrinsic value, utility value, and cost, are influenced by affective memory, previous experiences, and beliefs and behaviors. As explained by Wigfield and Eccles (2000), expectancies and values directly influence achievement choices, performance, effort, and persistence one places on a goal. From the constructs of expectancy-value theory, two main questions are created. Expectancies produce the question "Will I do well on this task?" (Eccles, 2009). Task value asks "Why should I do this task?" (Eccles, 2009).

Values are defined by Rokeach (1973) as beliefs about desired end states of a goal, of which achievement is related. Eccles et al. (1983) introduce subjective task values as how certain tasks meet different needs of individuals. As shown in Figure 2.1,

there are four components that comprise subjective task values which are attainment value - the personal importance of doing well on a given task (Wigfield & Eccles, 2000), intrinsic value - the enjoyment or perceived enjoyment of a task (Wigfield & Eccles, 2000), and utility value – the usefulness of and how a task fits into an individual's plans for the future (Wigfield & Eccles, 2000). Lastly there is perceived cost, which can be defined as an individual's evaluation of the emotional cost, perceived effort, and time constraints spent on the activity or task versus another activity (Wigfield & Eccles, 2000). Of attainment value, intrinsic value, and utility value, utility value is the most extrinsic. Most likely, the individual will be committed to a particular task in the efforts of reaching a sought after ending, rather than for the sake of merely completing it (Wigfield & Eccles, 2000).

To begin outlining the concepts of expectancies, Wigfield (1994) defined expectancy as beliefs a child has about how well he or she will do on a future task. In this context, ability beliefs are a person's beliefs about his or her ability on a task in the current state, while an expectancy belief is based off one's perception about success in the future (Wigfield & Eccles, 2000).

Atkinson (1957) was the initial pioneer of expectancy-value theory, while exploring risk-taking behavior. His 1957 study of approach and avoidance in relation to motive, expectancy and incentive explained if an individual found a task difficult, his probability for success was low. On the contrary, an easy task would result in high success. When the individual's expectancy for success was low, there is little embarrassment in failure. A high expectancy for success would result in high embarrassment for a failed task (Atkinson, 1957).

Expectancy-Value Theory in Education

Many studies conducted over expectancy-value theory in education revolve around students in math and their self-concepts of ability, gender differences, expectancies, and beliefs. Eccles and Wigfield (2000) conducted a study over gender differences, achievement beliefs and values in math and English. Findings from this study led the researchers to conclude the importance a student places on mathematics results in lower anxiety for the subject (Meece, Wigfield & Eccles, 1990). Math anxiety resulted in students' performance expectancies and perceived importance of math (Meece et al., 1990). This study was conducted over a two-year period with 860 5th through 12th grade students. The researchers measured student attitudes, math anxiety, and math achievement to determine students' self-evaluation and perception regarding their performance in mathematics. It was discovered through the study that when students placed greater importance on high math achievement, the students had less math anxiety, and the importance students placed on achievement in mathematics was not correlated to effects of expectancies on anxiety (Meece et al., 1990).

Past research indicates that as students age, they believe they are less competent in many activities, therefore, valuing those activities less (Wigfield & Eccles, 2000). One suggestion for this is that students have a better self-assessment over certain activities (2000). This self-assessment can also occur through self-comparison with their peers.

Expectancy-Value Theory in Career and Technical Education (CTE)

Dykeman et al. (2003) used expectancy-value theory in a career development and academic motivation study. The purpose of the study was to measure the relationship of career development course involvement to academic self-efficacy and motivation of high

school students. Bandura (1977) hypothesized that self-efficacy affects the choices, effort and persistence an individual makes towards activities. Findings related to academic motivation reported that helping students see the applicability of mathematics skills and how those skills can relate to future career goals could increase students' motivation towards mathematics (Dykeman et al., 2003). It was suggested that an intervention with students, such as academic planning counseling, should be given more priority among educational administrators and professionals in CTE.

Expectancy-Value Theory in Agricultural Education

Three studies from the *Journal of Agricultural Education* are cited for referencing or basing the study on expectancy-value theory. The first one sought to determine the expectations and values of students participating in supervised agricultural experience programs from first year teachers in Oklahoma who were alternatively certified. The findings from this study suggested the alternatively certified teachers had expectations for their students to manage their own supervised agricultural experience, keep accurate records, and do so with high quality and effort (Robinson & Haynes, 2011). The researchers also summarized from the teachers' findings that students are more willing to participate in supervised agricultural experiences when students realize the value and impact completing an SAE will have on their lives (Eccles, 2007; Robinson & Haynes, 2011). In addition, the researchers noted that while the teachers recognized the importance and value of SAE, and placed high expectations on students' ownership and management, the teachers need to be aware of how they implement and evaluate the programs to have optimum student effect.

Another study that utilized a form of expectancy-value theory was over science credit for agriculture classes based on Arkansas teachers. In this 1996 study by Johnson, teacher support and teacher perceptions were measured concerning the effects of offering science credit for agriculture. Results indicated Arkansas agriculture teachers are in high favor of supporting science credit for agriculture. Agriculture teachers supported science credit for agriculture due to the science credit enhancing agriculture's status within the school and the added student benefit. Student benefits, negative impact, program benefits, enrollment, and science content are five components concluded to having significant effects in predicting teacher support for science credit.

The third study from the *Journal of Agricultural Education* to use expectancy-value theory as a framework for study was conducted over teacher immediacy and student motivation. The findings in regards to expectancy-value theory proposed the nonverbal communication teachers emit is associated with students expectancy-value motivation in regards to a class. The researchers concluded "expectancies for success appear to be created and enhanced through consistent, positive, and supportive nonverbal communication" (Velez & Cano, 2008, p. 81). The researchers concluded through the findings that teacher body language has a large impact on student motivation, and teachers need to be aware of how they come across to students during classroom interactions (Velez & Cano, 2008).

Summary

Expectancy-value theory in education helps to answer many questions regarding one's perceived expectations or values for completing a set goal or participating in a given activity. Chosen as the theoretical framework of this study, expectancy-value

theory considers how children perceive their long-term goals, including career plans (Wigfield, 1994). When students at the secondary level define their expectancies for success and values for enrollment in an elective course, teachers, guidance counselors, and administrators can help meet the needs of these students to help them be successful.

CHAPTER 3

METHODOLOGY

The purpose of this study is first, to determine the level of ability, expectancy, and interest, importance, and usefulness students with no affiliation to a farm find in agriculture courses when being compared against their peers from more traditional agriculture backgrounds. The study also determined what kept students enrolled and interested in agriculture and considered the values students place on elective agriculture courses and what students expected to get out of such courses.

Participants

Data were collected during the fall 2015 semester from 211 agriculture students in grades 8-12 from an urban career center in Kentucky. Students were largely non-traditional (57%) while 43% of students reported being from traditional agriculture backgrounds. Students and parents, if applicable, were required to provide written consent to participate in the study (see Appendixes D, E, and F). Research approval has been granted by the University of Kentucky's Internal Review Board (IRB), IRB Number 15-0604-F4S and approval can be found under Appendix A.

Research Questions

The guiding research questions for this quantitative study were:

RQ1: What are the characteristics [sex, grade, affiliation to a farm (live on a farm, work on a farm, parents own a farm but do not live on one, no affiliation to a farm), and agriculture pathway] of the student participants?

RQ2: What are the ability beliefs of the student participants?

RQ3: What are the expectancies for success of the student participants

RQ4: What are the usefulness, importance, and interest levels of the student participants?

RQ5: What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)?

RQ6: What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)?

RQ7: What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-tradional)?

Research Design

Data was collected via online survey (Qualtrics®) at a local high school with a high number of non-traditional agriculture students enrolled in agriculture courses. For this study, the survey served as the main data collection instrument. Data was collected solely on the survey administered to students enrolled in agriculture courses in grades eight through twelve. The study followed a descriptive-correlational research design. Descriptive research looks at the situation, as it is currently occurring. Descriptive research strives to identify attributes of an occurrence based on observation (Williams, 2007). Correlational research is when two characteristics of a group are examined for their differences (Williams, 2007). According to Creswell and Creswell (2005), correlational research looks for relationships between two or more variables. The researcher sought to obtain a census of the students enrolled at the school, but can bring inference to a broader audience that includes future students enrolled at the selected school as well as students similar in demographics at other schools. Dong, Yang, Tang, Yang, & Chawla (2014) conducted a study with mobile phone users and inferred from

their results they could predict the same mobile phone usage traits among similar demographics. From the results, inference can be made these results can apply to schools across the United States that have similar demographics to the high school being studied, and infer their agricultural education enrollment would be similar.

Research Setting

The county the study was conducted in has a rural population of 12,583 and an urban population of 36,003, accounting for a total population of 48.586 residents. As of 2012, there were a total number of 668 farms in the county (USDA, 2012). The average farm size was 125 acres (USDA, 2012). Of the land being used for farming, 43.6% was considered pastureland, 40.1% was cropland, 8.8% was woodland, and 7.5% was for other uses (USDA, 2012). The research setting serves as a bedroom community to an urban city with a population of 290,000+.

Students who attend the career center attend one of two high schools located in the county. The career center houses courses in health sciences, public safety, information technology, business and marketing, family and consumer sciences, STEM courses, and agriculture sciences. Agriculture courses offered in the program include Agribusiness/Farm Management, Animal Science, Environmental Science and Technology, Floral Design, Food Science and Technology, Greenhouse Technology, Horticulture and Plant Science Systems, Interdisciplinary Agri-Biology, Landscape and Turf Management, Middle School Exploratory, Plant and Land Science, Principles of Agri-Science and Technology, Small Animal Technology, Vet Assisting 1, and Wildlife Resources.

Instrumentation

The questionnaire was designed using the items used to assess children's ability beliefs and subjective task values items from Wigfield and Eccles (2000). Due to the original math related items, the word "math" was replaced with "ag" or "agriculture" where appropriate to make the questionnaire relevant to the current study. In survey design, multiple-choice anchors of 3, 5, and 7 were used throughout the study, due to researcher choice. Through the duration of the study, participants were asked to complete the questionnaire one time. There was no pre- or post-tests to follow up with, and no control group. Tables 3.1, 3.2, and 3.3 describe the questions asked of the participants according to ability beliefs, expectancies, and usefulness, importance, and interest items, respectively. Table 3.4 describes the specific questions asked to the student participants.

Table 3.1 lists the ability belief items asked of the students. These items ask the student's present ability.

Table 3.1
Ability Beliefs Items

Survey Item	Item Statement
1	How good are you in your agriculture class(es)?
2	If you were to list all of the students in your agriculture class from best to worst, where would you rank yourself?
3	Some kids are better in one subject than another. For example, you might be better in agriculture than reading. Compared to most of your other school subjects, how good are you at agriculture?

Table 3.2 lists the expectancy items asked of the students. These items ask how the student expects to do in the future on a given task.

Table 3.2
Expectancy Items

Survey Item	Item Statement
4	How well do you expect to do in agriculture this year?
5	How good are you at learning something new in agriculture?

The items listed in Table 3.3 are the usefulness, importance, and interest items, which measure how the student sees the course(s) fitting in to his or her future, the intrinsic value attained from being enrolled in an agriculture class, and the importance of doing well in agriculture.

Table 3.3
Usefulness, Importance, and Interest Items

Survey Item	Item Statement
6	In general, how useful is what you learn in agriculture?
7	For me, being good in agriculture is...
8	In general, I find working on agriculture assignments
9	How much do you like being enrolled in agriculture?

Table 3.4 lists the demographic questions asked of the students. These questions were asked to help the researcher identify any common themes with students when they were divided in to traditional and non-traditional groupings.

Table 3.4
Student Questions

Survey Item	Item Statement
10	Why did you enroll in your first agricultural education class?
11	What motivates you to stay enrolled in agricultural education?
12	To what degree does your teacher influence you to stay enrolled in agricultural education?
13	To what degree do your parents influence you to stay enrolled in agricultural education?
14	To what degree do your peers influence you to stay enrolled?
15	Where do you see yourself five years from now?
16	What are your future career goals?
17	Do you have any affiliation with a farm?
18	What is your gender (sex)?
19	What grade are you currently in?
20	What agriculture pathway are you in?
21	Where do you rank yourself in this pathway, among your peers?
22	Was this pathway an interest before enrolling in agriculture?
22a	If this pathway was not an interest previous to enrolling in agriculture, who inspired you to enroll?
23	Why are you staying in this pathway?

Validity and reliability.

Once a panel of experts reviewed the survey, the chair of the study gave suggestions for demographic/characteristic questions. Ary, Jacobs, Razavieh, and Sorensen (2006) recommend utilizing pilot testing to help with clarity issues and wording. The survey was piloted at an area high school with similar student demographics the research site. The class size of nineteen (N=19) students completed the survey to help with reliability and a focus group of three (*n*=3) students assisted with face validity. The supervising teacher recommended these students to the researcher and together they provided feedback on confusing wording, repetitive questions, and areas of clarification for improved understanding of the questionnaire. Additions and corrections were made to the study based on student recommendations.

According to George and Mallory (2003) the following is a guideline to follow for Cronbach's alpha reliability of a "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable" (p. 231). All three areas of the instrument (Ability Beliefs, Expectancy, and Usefulness, Importance, and Interest Items) were tested and no group fell below .75, which resulted in acceptable reliability. Due to great success through previous administration of this instrument, psychometric properties have been established, specifically reliability, construct validity, and content validity through the previous work of Wigfield and Eccles (2000).

Data Analysis

The quantitative data were analyzed using Statistical Package for the Social Sciences® (SPSS) 23 for Windows.

RQ1: What are the characteristics [sex, grade, affiliation to a farm (live on a farm, work on a farm, parents own a farm but do not live on one, no affiliation to a farm), and agriculture pathway] of the student participants? To explain the characteristics, frequencies and percentages will be utilized.

RQ2: What are the ability beliefs of the student participants? Measures of central tendencies were used to explain the ability beliefs of the student participants.

RQ3: What are the expectancies for success of the student participants? Expectancies for success were explained utilizing measures of central tendencies.

RQ4: What are the usefulness, importance, and interest levels of the student participants? To describe the usefulness importance and interest levels, measures of central tendencies were utilized.

RQ5: What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)? To explain the differences, *t*-tests were utilized.

RQ6: What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)? A standardized *t*-test was used to explain the differences between traditional and non-traditional students based upon their expectancies for success.

RQ7: What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-traditional)? To describe the differences, a *t*-test was utilized.

CHAPTER 4

RESULTS

Research Questions

RQ1: What are the characteristics [sex, grade, affiliation to a farm (live on a farm, work on a farm, parents own a farm but do not live on one, no affiliation to a farm), and agriculture pathway] of the student participants?

RQ2: What are the ability beliefs of the student participants?

RQ3: What are the expectancies for success of the student participants?

RQ4: What are the usefulness, importance, and interest levels of the student participants?

RQ5: What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)?

RQ6: What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)?

RQ7: What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-traditional)?

Findings

Research Question 1: What are the characteristics [sex, grade, affiliation to a farm (live on a farm, work on a farm, parents own a farm but do not live on one, no affiliation to a farm), and agriculture pathway] of the student participants?

Part one sought to describe the characteristics of the students enrolled in agriculture courses at JCTC. The following characteristics were deemed appropriate for the study – affiliation to farm, sex, grade, and agriculture pathway – which helped answer

other research questions and describe trends in findings. Data were summarized via frequency and percentages, and displayed in tables. Table 1 describes the grades (8th grade through 12th grade) of the students. As shown in the results, 6.00% (*n* = 13) were in 8th grade. Freshmen accounted for the largest percentage of students, 46.67% (*n* = 98); while 30.78% (*n* = 64) of the students were sophomores. Twenty-two (10.48%) of students were juniors and there were 13 (6.19%) seniors. To compare across the data sets even deeper, non-traditional students had the largest number of students, with 6.67% (*n* = 8) eighth graders, 52.50% (*n* = 63) freshmen, 27.50% (*n* = 33) sophomores, 5.83% (*n* = 7) juniors, and 7.50% (*n* = 9) seniors. Traditional students accounted for the least number of students, with 5.56% (*n* = 5) eighth graders, 38.89% (*n* = 35) for freshmen, 34.44% (*n* = 31) sophomores, 16.67% (*n* = 15) juniors and 4.44% (*n* = 4) seniors.

Table 4.1
Grade Level in Affiliation to Home Residency in Relation to a Farm

	Traditional		Non-Traditional			
	Live on Farm or Work on Farm (*n* = 90)		Parents own farm, but don't live on or No Affiliation to a Farm (*n* = 120)		Total (N = 210)	
Characteristic	*f*	%	*f*	%	*f*	%
Grade						
8th	5	5.56	8	6.67	13	6.20
9th	35	38.89	63	52.50	98	46.67
10th	31	34.44	33	27.50	64	30.78
11th	15	16.67	7	5.83	22	10.48
12th	4	4.44	9	7.50	13	6.19

Table 2 shows sex of students in affiliation to home residency in relation to a farm. Traditional males accounted for 56.56% (*n* = 51) of students and females accounted for 43.33% (*n* = 39). Non-traditional males accounted for 47.50% (*n* = 57) of students and females represented 52.50% (*n* = 63) of the non-traditional students.

Table 4.2
Sex in Affiliation to Home Residency in Relation to a Farm

	Traditional		Non-Traditional			
	Live on Farm or Work on Farm (n = 90)		Parents own farm, but don't live on or No Affiliation to a Farm (n = 120)		Total (N = 210)	
Characteristic	*f*	%	*f*	%	*f*	%
Sex						
Male	51	56.67	57	47.50	108	51.49
Female	39	43.33	63	52.50	102	48.57

Five students reported pursuing the agribiotechnology pathway, for a percentage of 2.38% of the total. Three students (3.33%) are traditional and two students (2.13%) are from a non-traditional background.

The agribusiness pathway consisted of sixteen students, which is 7.62% of agriculture students. Three (3.33%) come from a traditional agriculture background and two (1.67%) are from a non-traditional background.

Agriculture power, structural and technical systems has 9.52% (n = 20) students enrolled. Nine students (10.00%) are traditional and 9.17% (n = 11) students are non-traditional.

From the overall sample, the animal science pathway accounted for over half of the students, with a total percentage of 56.00% (n = 118) students enrolled. For students pursuing the animal science pathway, 55.55% (n = 50) are from traditional agriculture backgrounds and 56.67%% (n = 68) are non-traditional.

The environmental science and natural resources pathway was the next most populated pathway, with 10.48% (n = 22) of students enrolled. Seven students (7.77%) are traditional and fifteen students (12.50%) are non-traditional.

The food science and processing pathway also had a total of five students (2.38%) pursuing the pathway. Two students (2.22%) are traditional and three students (2.50%) are from a non-traditional background.

Plant and horticulture systems pathway has a total of 23 students, which make up 10.95% of the total student agriculture pathway enrollment. Twelve (13.33%) students are traditional, while 9.17% (n = 11) are non-traditional.

Table 4.3
Agriculture Pathway in Affiliation to Home Residency in Relation to a Farm

	Traditional		Non-Traditional			
	Live on Farm or Work on Farm (n = 90)		Parents own farm, but don't live on or No Affiliation to a Farm (n = 120)		Total (N = 210)	
Agriculture Pathway	*f*	%	*f*	%	*f*	%
Agribiotechnology	3	3.33	2	1.67	5	2.38
Agribusiness	6	6.66	10	8.33	16	7.62
Agriculture Power, Structural, and Technical Systems	9	10.00	11	9.17	20	9.52
Animal Science	50	55.55	68	56.67	118	56.19
Environmental Science/Natural Resources	7	7.77	15	12.50	22	10.48
Food Science and Processing	2	2.22	3	2.50	5	2.38
Plant and Horticulture Systems	12	13.33	11	9.17	23	10.95

Research Question 2: What are the ability beliefs of the student participants?

Table 4.4 summarizes the ability beliefs of students. Students reported a mean of 1.72 (SD = .605) for how good they were in their agriculture class(es). The mean for students self-ranking themselves in comparison to their classmates in agriculture class was 2.38 (SD = .877). When students compared their performance in agriculture to their performance in other courses, students reported a mean of 1.28 (SD = 3.09).

Table 4.4
Ability Belief Items

	Range	*M*	*SD*
How good are you in your agriculture class(es)?	1 - 3	1.72	.605
If you were to list all of the students in your agriculture class from best to worst, where would you rank yourself?	1 - 5	2.38	.877
Some kids are better in one subject than another. For example, you might be better in agriculture than reading. Compared to most of your other school subjects, how good are you at agriculture?	1 - 6	1.28	3.09

Research Question 3: What are the expectancies for success of the student participants?

Research question three utilized measures of central tendencies to answer the expectancies of success for agriculture students, as reported in Table 4.5. The student participants enrolled in agriculture courses had an average expectancy for success of 2.40 (*SD* = .98) when responding to how well he or she expects to do in agriculture this year. The student participants reported a mean of 2.43 (*SD* = 0.88) when rating how good they were at learning something new in agriculture.

Table 4.5
Expectancies for Success Items

	Range	*M*	*SD*
How well do you expect to do in agriculture this year?	1 - 5	2.40	.98
How good are you at learning something new in agriculture?	1 - 5	2.43	.88

Research Question 4: What are the usefulness, importance, and interest levels of the student participants?

Table 4.6 describes the usefulness, interests, and ability beliefs in student participants. Students reported a mean of 2.50 (*SD* = 1.24) when rating the usefulness of what they learn in their agriculture class(es). A mean of 2.55 was reported (*SD* = 1.23) for students rating how important it was to them to be good in agriculture. Working on agriculture assignments received a mean of 2.58 (*SD* = 1.09). Students reported a mean of 2.10 (*SD* = .87) when rating how much they liked being enrolled in agriculture.

Table 4.6
Usefulness, Interest, and Importance Items

	Range	*M*	*SD*
In general, how useful is what you learn in agriculture?	1 - 7	2.50	1.24
For me, being good in agriculture is...	1 - 7	2.55	1.23
In general, I find working on agriculture assignments	1 - 6	2.58	1.09
How much do you like being enrolled in agriculture?	1 - 5	2.10	0.86

Research Question 5: What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)?

Table 4.7 compares the means between the traditional and non-traditional students in reference to their differences in ability beliefs. When students were asked how good they were in their agriculture class, traditional students reported a mean of 1.59 and non-traditional students' responses resulted in a mean of 1.82, for a total mean of 1.72. When students were asked to list all of the students in their agriculture class from best to worst, and then rank themselves compared to their peers, traditional students had a mean of 2.13 and non-traditional students had a mean of 2.56, for a total mean of 2.38. Finally, students were asked to compare their performance in agriculture classes compared to their other school subjects. Traditional students had a mean of 2.59 and non-traditional students had a mean of 3.47.

Table 4.7
Differences in Ability Beliefs

	Traditional	Non-Traditional	
	Live on Farm or Work on Farm (n = 90)	Parents own farm, but don't live on or No Affiliation to a Farm (n = 121)	Total (N = 211)
Ability Beliefs	Mean	Mean	Mean
How good are you in your agriculture classes?	1.59	1.82	1.72
If you were to list all of the students in your agriculture class from best to worst, where would you rank yourself?	2.13	2.56	2.38
Some kids are better in one subject than another. For example, you might be better in agriculture than	2.59	3.47	3.09

reading. Compared to most of your other school subjects, how good are you at agriculture?					

Research question five describes the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional). When students were asked how good they were in their agriculture class, traditional students reported a mean score of 1.59 (*SD* = 0.56) while non-traditional students received a mean score of 1.81 (*SD* = 0.62). Students ranking themselves in their agriculture class among their peers yielded a mean score of 2.13 (*SD* = 0.82) for traditional students and for non-traditional students, a mean score of 2.56 (*SD* = 0.88) was reported. The third question for ability beliefs, regarding students ranking how well they do in their agriculture class compared to other courses at school reported a mean of 2.59 (*SD* = 1.17) for traditional students and a mean of 3.47 (*SD* = 1.23).

Table 4.8
Independent t-test on Ability Beliefs

Variables	*n*	*M*	*SD*	*t*	Cohen's *d*
How good are you in your agriculture class?					Small
Traditional	90	1.59	0.56	-2.70	-0.37
Non-traditional	121	1.81	0.62		
If you were to list all of the students in your agriculture class from best to worst, where would you rank yourself?					Small
Traditional	90	2.13	0.82	-3.64	-0.51
Non-Traditional	121	2.56	0.88		
Some kids are better in one subject than another. For example, you might be better in agriculture than reading. Compared to most					Small

of your other school subjects, how good are you at agriculture?					
Traditional	90	2.59	1.17	-5.30	-0.07
Non-Traditional	121	3.47	1.23		

Research Question 6: What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)?

Table 4.9 describes the differences of expectancies for success between traditional and non-traditional students. Traditional students reported a mean of 2.21 when asked how well they expected to do in agriculture this year, while non-traditional students reported a mean of 2.54, for a total mean of 2.40. Traditional students being asked how good they are at learning something new in agriculture reported a mean score of 2.21 and non-traditional students reported a mean score of 2.59, for an overall mean of 2.43.

Table 4.9
Differences in Expectancies for Success

	Traditional	Non-Traditional	
	Live on Farm or Work on Farm (n = 90)	Parents own farm, but don't live on or No Affiliation to a Farm (n = 121)	Total (N = 211)
Expectancies for Success	Mean	Mean	Mean
How well do you expect to do in agriculture this year?	2.21	2.54	2.40
How good are you at learning something new in agriculture?	2.21	2.59	2.43

Research question six sought to describe the differences in expectancies for success between traditional and non-traditional students. Traditional students reporting how well they expect to do in agriculture this year reported a mean score of 2.21 (SD = 0.91) and non-traditional students reported a mean of 2.54 (SD = 1.01). In ranking how

good they were at learning something new in agriculture, traditional students reported a mean of 2.21 (*SD* = 0.77) and non-traditional students had a mean of 2.59 (*SD* = 0.92). See Table 4.10.

Table 4.10
Independent t-tests on Expectancies for Success

Variables	*n*	*M*	*SD*	*t*	Cohen's *d*
How well do you expect to do in agriculture this year?					Small
Traditional	90	2.21	0.92	-2.45	-0.34
Non-traditional	121	2.54	1.01		
How good are you at learning something new in agriculture?					Small
Traditional	90	2.21	0.77	-3.25	-0.45
Non-Traditional	121	2.59	0.92		

Research Question 7: What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-traditional)?

Table 4.11 describes traditional and non-traditional students' differences in usefulness, importance, and interest levels. Traditional students had a mean of 2.00 and non-traditional students had a mean of 2.87 for a total mean of 2.50 when reporting how useful what they learned in agriculture was. When students answered how important it was that they were good in agriculture, traditional students had a mean score of 2.12 and non-traditional students had a mean score of 2.87 for a total mean of 2.55. When students reported the ease they found working on agriculture assignments, traditional students had a mean score of 2.44 and non-traditional students had a mean of 2.69, for a total mean score of 2.58. The last question, how much do you like being enrolled in agriculture, had

a mean score of 1.73 from traditional students and a mean of 2.38 from non-traditional students, for a total mean of 2.10.

Table 4.11
Differences in Usefulness, Importance, and Interest

	Traditional	Non-Traditional	
	Live on Farm or Work on Farm (n = 90)	Parents own farm, but don't live on or No Affiliation to a Farm (n = 121)	Total (N = 211)
Usefulness, Importance, and Interest	Mean	Mean	Mean
In general, how useful is what you learn in agriculture?	2.00	2.87	2.50
For me, being good in agriculture is..	2.12	2.87	2.55
In general, I find working on agriculture assignments..	2.44	2.69	2.58
How much do you like being enrolled in agriculture?	1.73	2.38	2.10

Research question seven explains the differences between traditional and non-traditional students regarding the usefulness, importance, and interest towards agriculture classes. The usefulness of what students learned in agriculture yielded a mean score of 2.00 (SD = 0.91) for traditional students and a mean of 2.87 (SD = 1.32) for non-traditional students. For traditional students, the importance of being good in agriculture received a mean of 2.12 (SD = 0.99) and non-traditional students had a mean score of 2.87 (SD = 1.32). The third item, working on agriculture assignments, had a mean score of 2.44 (SD = 0.97) from traditional students and a mean score of 2.69 (SD = 1.20).

Traditional students had a mean score of 1.76 (*SD* = 0.78) for how much they liked being enrolled in agriculture and non-traditional students had a mean of 2.38 (*SD* = 0.94).

Table 4.12
Independent t-tests in Usefulness, Importance, and Interest

Variables	*n*	*M*	*SD*	*t*	Cohen's *d*
In general, how useful is what you learn in agriculture?					Small
Traditional	90	2.00	0.91	-5.62	-0.77
Non-traditional	120	2.87	1.32		
For me, being good in agriculture is...					Small
Traditional	89	2.12	0.99	-4.69	-0.65
Non-Traditional	120	2.87	1.30		
In general, I find working on agriculture assignments					Small
Traditional	90	2.44	0.97	-1.65	-0.23
Non-Traditional	121	2.69	1.20		
How much do you like being enrolled in agriculture?					Small
Traditional	90	1.76	0.78	-5.43	-0.72
Non-Traditional	121	2.38	0.94		

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

By conducting this study and reviewing data, the influencing factors of youth's motivation to continue enrolling in agricultural education, how they perceive themselves performing in the class compared to other subjects and their peers, and the importance they place on their classes and agriculture pathway were determined. The results of this study will continue to help current agricultural educators to understand the needs the diverse student population of agriculture will demand in future years.

The purpose of this study is first, to determine the level of ability, expectancy, and interest, importance, and usefulness students with no affiliation to a farm find in agriculture courses when being compared against their peers from more traditional agriculture backgrounds. The study also determined what kept students enrolled and interested in agriculture and considered the values students place on elective agriculture courses and what students expected to get out of such courses.

Summary of Research with Conclusions, Implications, Recommendations, and Recommendations for Further Research

Research Question 1 – Student Characteristics

Of the 211 students who participated in this study, six percent were in eighth grade, 46.67% were freshmen, 30.78% were sophomores, 10.48% were juniors, and 6.19% were seniors.

Of the students, 108 were male, and 102 were female. For agricultural pathway enrollment, Agriculture Power, Structural, and Technical Systems had 20 students enrolled, 118 students chose Animal Science, Environmental Science and Natural

Resources had 22 students, 23 students were in Plant and Horticulture Systems, five students are in agribiotechnology, and five students were in food science and processing.

Agriculture students in this study, regardless of home background (traditional or non-traditional in relation to living on a farm) participated in all of the agriculture pathways offered at JCTC. Animal science by far had the largest amount of students enrolled. This could be implied that students enrolled in the animal science pathway are most interested in animal science courses and potential animal science related careers. Another implication is students enjoy the opportunities available to them in class, such as labs, hands on experiences with animals, and topics covered in classes.

It can be concluded from the high enrollment in the animal science pathway is expand the number of animal science courses available to continue catering to animal science interests. Since many concepts learned in animal science are transferrable to other science based agricultural courses, teachers and guidance counselors should market transferrable skills to other agricultural science courses to show students other possibilities for courses and job opportunities.

Food science and processing and agribiotechnology pathways had the least amount of students pursuing the pathways. To help with increased numbers in the pathways, again, teachers and guidance counselors could help market course topics to potential career paths to students who may be unfamiliar with such topics.

Research Question 2 - What are the ability beliefs of the student participants?

When students were reporting how good they were in their agriculture classes, they reported a mean of 1.72 (*SD* = .605) with a range of 1-3, answered on a 3-point scale. The mean for students self-ranking themselves in comparison to their classmates in

agriculture class was 2.38 (*SD* = .877) with a range of 1-5, answered on a 5-point scale. When students compared their performance in agriculture to their performance in other courses, students reported a mean of 1.28 (*SD* = 3.09) with a range of 1-6, answered on a 7-point scale. From the results, it can be implied that the students feel they have the ability to perform well in agriculture classes compared to other courses they are taking, meanwhile, the mean was quite average when responding to how good they were in agriculture. Students are saying they are average in their agriculture classes, but do well in agriculture compared to other courses they take in school. What could be implied from the findings is that students believe they are more capable in agriculture courses than they are in other school subjects.

Research Question 3 - What are the expectancies for success of the student participants?

Students reporting how well they expected to do in agriculture this year had a mean score of 2.40 (*SD* = .98) with a range of 1-5 on a 5-point scale. The question of how good are you at learning something new in agriculture had a mean score of 2.43 (*SD* = .88) with a range of 1-5 on a 5-point scale. Implications from the results show that the student population as a whole, in general, expects to do well in their agriculture class for the academic year, and they are good at learning something new in agriculture. These results show that students have generally high expectancies for success in their agriculture class(es).

Research Question 4 - What are the usefulness, importance, and interest levels of the student participants?

When students reported in general, how useful is what they learn in agriculture, the question yielded a mean score of 2.50 (*SD* = 1.24) with a range of 1-7 on a 7-point scale. For students, being good in agriculture is (extremely important through not at all important) had a mean score of 2.55 (*SD* = 1.23) with a range of 1-7 on a 7-point scale. The question regarding students working on agriculture assignments (very easy through very difficult) had a mean score of 2.58 (*SD* = 1.09) with a range of 1-6 on a 7-point scale. When students were asked how much they liked being enrolled in agriculture, responses yielded a mean of 2.10 (SD = 0.86) with a range of 1-5 on a 5-point scale.

These results show that students have high usefulness, importance, and interest levels regarding agriculture. This is encouraging considering the student demographics of the participants who participated in this study, in which the responses to "How much do you like being enrolled in agriculture?" and "In general, how useful is what you learn in agriculture?" yielded the highest means. Implications from the results can be that even though over half of the student population is considered non-traditional, students are still finding their agriculture classes interesting and useful.

Research Question 5 - What are the differences in ability beliefs by the participants' affiliation to a farm (traditional v non-traditional)?

Ability beliefs are one construct of the items used to assess ability beliefs and subjective task values (Wigfield & Eccles, 2000). Traditional students revealed the highest ability beliefs in all three ability variables, while non-traditional students had

means that scored below traditional students. The difference was considered small between traditional and non-traditional students for all three ability items.

Based upon these findings, it is concluded that traditional students are most confident in their abilities in the agriculture classroom and non-traditional students are less confident in their ability beliefs. This could be due to students who are from a farm are in agriculture class due to genuine interest in the subject from their backgrounds or they are confident in their abilities because of their home background through involvement on the farm. Students who are from a non-traditional are provided new opportunities that they may have never experienced before, therefore, perhaps they are not as confident in their abilities for learning new things outside of their backgrounds as traditional agriculture students. One item to be considered is the thought of pushing traditional agriculture students away from agricultural education.

An area of future research could be that students need to be broken down more by the extent of their involvement of agriculture and farming. An additional area of future research could be in the retention rates of students who come from a farming background and how they feel their needs are being met or unmet in agricultural education.

Research Question 6 - What are the differences in expectancies for success by the participants' affiliation to a farm (traditional v non-traditional)?

Traditional students revealed the highest expectancies for success in both construct areas (Table 4.9), followed by non-traditional students with small differences for both expectancy items being asked.

Based on the findings, students who are from a traditional agriculture background report greater expectancies for success in their agriculture classes. This data concludes

these students feel they will do well in their agriculture course(s). This could be due to these students feeling like they have opportunities to expand on material and information that is already interesting to the, parent encouragement for enrollment in agriculture is positive reinforcement, or perhaps they are truly invested in their course due to the skills the classes provide or career opportunities available.

Guidance counselors, agricultural education teachers, and CTE directors should be commended for recruiting an audience of students who are previously unrelated to agriculture and giving them opportunities to find success in a future career path. While it is encouraging that traditional students are enrolled in agriculture and report higher expectancies for success than non-traditional students, the demographics of the traditional farmer and agriculturalist are continually changing. Agriculture and it's employees are continuing to be more diversified, so as educators, it is imperative that we are providing opportunities for success for the non-traditional agriculture.

While the results were not surprising that students classified as a traditional agriculture had the highest expectancies for success, it would be interesting to see how the students scored if there were additional groups the students could be categorized into by their extent of agriculture and farming.

Research Question 7 - What are the differences in usefulness, importance, and interest levels by the participants' affiliation to a farm (traditional v non-traditional)?

Usefulness, importance, and interest of the student participants by their association to a farm resulted in traditional students reporting the highest means. When

students were classified in to traditional and non-traditional for the usefulness, importance, and interest items the effect size was small between the groups.

These results imply students find what they are learning from their agriculture classes are useful to them. Students with a traditional background find the most usefulness in agriculture, which can imply the material being taught in the average agriculture class is still more relevant to a traditional student than it is to a student not from a farming background.

Future research in regards to usefulness, interest, and importance in agriculture for students could be in the area of how important they perceive agriculture to be, for food production, future careers, and how it applies to their life, in all areas of home background, with students being categorized more specifically into categories regarding their relation to a farm or agriculture. This could be telling for agriculture teachers, especially if most of their students have no affiliation to a farm or are from a non-traditional agriculture background. Results from this type of study could show areas of improvement in agricultural education pursuits to these types of students.

Implications from Expectancy-Value Theory

With the help of expectancy-value theory, the results of this study imply students who have a traditional background to a farm report greatest abilities, expectancies for success, and usefulness, interest, and importance for their agriculture courses when being compared to their non- traditional peers. Through the findings, it can be concluded that traditional students have high value placed in agriculture and the future of the agriculture industry, and they have confidence in their expectancies for success. While this is exciting for the agriculture industry, future jobs will be need to be filled with people from

diverse backgrounds that will have different perspectives on agriculture. Therefore, how can we as educators better prepare the future employees of agriculture enrolled in our agricultural education courses to have just as high of ability beliefs, expectancies for success, and find as much usefulness, importance, and interest in agriculture as their more traditional peers?

Recommendations for Future Research

A theory to consider for the future of this research would be Apprenticeship of Observation Theory (Lortie, 1975). Lortie (1975) coined the term "apprenticeship of observation" (p. 65), while working with pre-service teachers. Through his work, Lortie claimed in *Schoolteacher* pre-service teachers have spent considerable amounts of time learning from and observing the teachers that taught them during their school years. Therefore, by the time pre-service teachers are ready to begin formal teacher education, teacher education programs have little effect on improving methods and practices of pre-service teachers (Mewborn & Tyminski, 2006). Due to the results of the study, it would be interesting to look at this study again through the lens of Apprenticeship of Observation, since the traditional students had higher ability beliefs, expectancy values, and interest, importance in agricultural education classes than did non-traditional students. Therefore, studying traditional students, their previous farm work, and what they gain from observing and working with parents, bosses, or family members on the farm before entering an agriculture class would be telling for educators in motivating traditional students, and how to increase the ability beliefs, expectancies for success, and usefulness, interest, and importance in agriculture classes for non-traditional students.

As the diversity of agricultural education continues to expand over the years, it will be crucial that agricultural education teachers provide opportunity to the wide variety of students they will serve. Knowing what motivates students to enroll in agricultural education and what keeps them enrolled in agriculture will be vital to the success of diversity in agricultural education and helping fill the large voids that currently exist in agriculture careers.

One important area of research to consider for the future is studying what influences students who see themselves as above average in their agriculture classes, especially the students that have no affiliation to a farm. Additionally, connecting agriculture content with all students to their ability beliefs, expectancies for success, and making agriculture useful to students not actively involved in farming can help students view agriculture not only as a class to fulfill a class period, but make help all students make strides towards a future in agriculture. If a student chooses to not pursue a career in agriculture, then at least agriculture will be making an impact in the student's life.

There was a constant decrease in student response from freshman year to senior year (Table 4.1), showing an assumption that more and more students choose to discontinue enrollment in agriculture classes as they get farther into their high school career. If I were to do this study again, I would want to administer a survey to those students who had previously enrolled in agriculture courses, but for some reason have not continued in agriculture to see how priority levels change as students continue on their educational journey and to discover why agricultural education could no longer serve their needs. It would also be interesting to consider the effect of family structure on students' enrollment and motivational choices. For example, in the demographics section

of the questionnaire, asking about parent marital status and family structure (married, divorced, raised by a single parent, raised by grandparents or other family members, etc.) could be telling in enrollment choices, due to family structure and home environment having effects on a child's academic motivation (Eccles, 2009). It would also be interesting to compare motivations for FFA involvement as compared to academic motivation in agriculture, especially for students who report low ability beliefs, expectancies for success, and usefulness, importance, and interest items.

Limitations

This survey was replicated and adapted from Wigfield and Eccles (2000) study. However, during the pilot-test, the focus group recommended removing two of the questions in the "Usefulness, Importance, and Interest Items" due to repetitiveness. The research took this into consideration and removed the two items – "Compared to most of your other activities, how useful is what you learn in math?" and "Compared to most of your other activities, how important is it for you to be good at math?" Should the researcher repeat this study again, those two items would be added back into the study and modified to fit an agricultural classroom. Additionally, in the classroom with the long-term substitute teacher at JCTC, there were a high number of students who either did not turn in parent consent forms or chose not to do the survey. Also, when students were absent from school or not in class, no effort was made to reach those students.

Discussion

At the beginning of this study, I was expecting students who live on a farm to have the highest ability beliefs, expectancies for success, and the most usefulness, interest, and importance for agriculture, which ended up being the case. Through the

findings of this study, it was encouraging to learn so many students who are of non-traditional backgrounds have beliefs about their abilities and expectancies, and importance in agriculture not far behind their traditional peers. I also learned that as a future educator, I need to be mindful about how I teach agriculture to a non-traditional agriculture student to not push them away or alienate them among their traditional peers, by offering a variety of courses that appeal to traditional farm students who plan to return to the farm, students who have never stepped foot of a farm, and everyone in between, while at the same time, connecting content to all audiences and engaging them with skills for the future.

The results from this study will be valuable to guidance counselors, administrators, current and future agriculture teachers, and the FFA organization. Based on the results specific to this school, guidance counselors should be commended for guiding the non-traditional agriculture student to enroll in agriculture courses, due to the large number enrolled in the courses at JCTC. There is still a belief floating around in high schools that ag classes are an "easy A", however, the skills acquired and career advancement opportunities refute that myth. In order to continue capturing a large audience of students, retaining them during their four years of high school, and hopefully guiding them towards an agriculturally related career, piquing students' interest in agriculture should begin long before the start of their freshman year through active agriculture exposure and recruitment in elementary and middle school.

These findings are also exciting for administrators, especially those pondering the future of their CTE program or those without an agricultural education program. Students reporting a head start on their future career path, new skills acquired, and real-world

application should be an encouragement to administrators to continue support and funding for their agricultural programs.

As a future agricultural educator, the results from this study only scratch the surface at what is currently occurring in agricultural education. Due to the changing demographics in agricultural education, a lot of focus and attention has been towards the retention of diverse students in agricultural education and FFA. While this is certainly important, it is also important to create and keep a balance between non-traditional agriculture and traditional production agriculture. As agricultural educators, we have a large responsibility to teach the skills and science behind modern day food production, while not only focusing on "cows, sows and plows", and at the same time, not removing the agriculture from agriculture. No matter how much advanced technology changes the way food is grown in the United States, traditional production agriculture will always have a place in American agriculture.

APPENDIX A: IRB APPROVAL

UK
UNIVERSITY OF
KENTUCKY

Office of Research Integrity
IRB, IACUC, RDRC
315 Kinkead Hall
Lexington, KY 40506-0057
859 257-9428
fax 859 257-8995
www.research.uky.edu/ori/

Initial Review

Approval Ends
August 26, 2016

IRB Number
15-0604-F4S

TO: Morgan Schatbuch
Rural Sociology
307 Garrigus Bldg
0215
(319) 430-6192

FROM: Chairperson/Vice Chairperson
Non-medical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol Number 15-0604-F4S

DATE: September 16, 2015

On September 16, 2015, the Non-medical Institutional Review Board approved minor revisions requested at the convened meeting on August 28, 2015 for your protocol entitled:

What are the Intrinsic Motivating Factors For Students to Enroll in Agricultural Education?

Approval is effective from August 28, 2015 until August 26, 2016 and extends to any consent/assent form, cover letter, and/or phone script. If applicable, attached is the IRB approved consent/assent document(s) to be used when enrolling subjects. **[Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.]** Prior to the end of this period, you will be sent a Continuation Review Report Form which must be completed and returned to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after IRB approval has been obtained, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's IRB Survival Handbook web page [http://www.research.uky.edu/ori/IRB-Survival-Handbook.html#PIresponsibilities]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [http://www.research.uky.edu/ori/]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9428.

N. Van Tubergen, PhD/ah
Chairperson/Vice Chairperson

APPENDIX B: PRINCIPAL CONSENT

JESSAMINE CAREER & TECHNOLOGY CENTER
881 Wilmore Road • Nicholasville, KY 40356 • 859-881-8324

June 16, 2015

Morgan Schafbuch
Department of Community & Leadership Development
University of Kentucky College of Agriculture
307 W.P. Garrigus Building
Lexington, Kentucky

Dear Ms. Schafbuch:

I am writing to document our support and commitment to participate in a research project developed by the University of Kentucky College of Agriculture, Food and Environment and Department of Community and Leadership Development.

I am allowing University of Kentucky researchers to enter our school to perform a survey with high school agricultural education students.
We understand that all students will provide consents, and parents of students under age 18 will provide consents to participate in the evaluation and we will comply with all requirements of the University of Kentucky for engaging minor students in evaluation activities. This project is also contingent upon approval by the Jessamine County Board of Education at the August 24th 2015 regular board meeting.

We look forward to working with you on this program.

Sincerely,

Dexter Knight
Jessamine Career and Technology Center Principal

APPENDIX C: JCTC BOARD APPROVAL

Jessamine County Board of Education

Agenda Item

JESSAMINE COUNTY SCHOOLS JCS Great by Choice!

APPROVED
AUG 24 2015
BO# 13

☒ Consent Agenda
☐ Action Item
☐ Report
☐ Information

Meeting Date: 8/24/15

Staff Contact Person: Dexter Knight

Subject: Survey of JCTC Ag Education students by UK Ag Ed Graduate program

Background: Allow University of Kentucky Graduate student Morgan Schafbuch perform a student survey with High school Ag Education students. Consent forms will be required for students under the age of 18 requiring parent's signature giving permission for survey to be administered to their student.

Budget Implications: None

Superintendent's Recommendation:

APPENDIX D: ASSENT FORM

Assent Form (17 and Younger) Morgan L. Schafbuch

ASSENT FORM

What are the Intrinsic Motivating Factors for Students to Enroll in Agricultural Education?

Invitation - You are invited to be in a research study being done by Morgan Schafbuch, a student from the University of Kentucky, Department of Community and Leadership Development. You were selected to participate because you are a student enrolled in the agricultural education program at your local high school. If you consent to volunteer, you will be one of about 400 other participants in the study. Ms. Morgan Schafbuch and Dr. Stacy Vincent from the University of Kentucky are directing this study.

What You Are Asked to Do - If you agree to be in the study, you will be asked to complete an online questionnaire, which you will take during your regularly scheduled class time. You will be using school provided computers/iPads/laptops to complete the questionnaire. This will be a one–time visit where you will need to complete the questionnaire only once. The survey will take about a half hour to complete. Your answers to these questions will allow us to learn why you enrolled in agricultural education, and why you choose to continue enrolling in agriculture classes. If you choose not to participate, you will simply sit with the class while your remaining classmates complete the survey.

Why You Should or Should Not Participate – You should NOT consent to participate in this study if you don't want Ms. Schafbuch or Dr. Vincent to use your answers from your survey, or don't want to participate in the study. By signing this form, you are allowing Ms. Schafbuch to use your answers from your survey as part of the study. If you consent to being in this study, it should be because you want to, and are serving as a volunteer. If you choose not to participate in the study, you will not lose any rights or benefits, as this survey is a research only activity, and if you decline participation, you will not have to take it. At any time during the study you can withdraw your permission for Ms. Schafbuch to include your response in the evaluation project data file simply by telling your instructor or Ms. Schafbuch. In that event the data will be deleted. It's your choice to participate, no one will be mad if you don't.

Confidentiality – If you agree to participate, your answers will be pooled with answers from about 400 other students who are enrolled in agricultural education. The answers from your survey will be collected and stored on a password locked computer in Ms. Schafbuch's office, and the answers from the survey will be collected anonymously. We will keep confidential all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

Benefits –There is no guarantee that you will receive any direct benefits from the research.

Who Will See the Information You Give? – The only people who will see the responses you give from your survey are Ms. Schafbuch and Dr. Vincent. Every effort will be made to prevent anyone who is not on the

research team from knowing what information you gave us. The answers from the survey will be kept on a password-protected computer.

Risks and Discomforts – There are no major discomforts or risks for participating in this study. If something makes you feel bad while you are in the study, please tell Morgan Schafbuch. If you decide at any time you do not want to finish the study, you may stop whenever you want.

What if You Have Questions - You can ask Morgan Schafbuch questions any time about anything in this study. You can also ask your parent any questions you might have about this study. Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Morgan Schafbuch at (319) 430-6192. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky between the business hours of 8am and 5pm EST, Mon-Fri. at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

Signing this paper means that you have read this or had it read to you, and that you want to be in the study. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be mad if you do not sign this paper or even if you change your mind later. You agree that you have been told about this study and why it is being done and what to do.

_____ _____

Signature of Person Agreeing to be in the Study Date

_____ _____

Name of [Authorized] Person Obtaining Informed Assent Date

NOTE – Please complete and sign two copies of this form. Please keep one for yourself and give one signed copy to Ms. Schafbuch.

APPENDIX E: PARENT CONSENT FORM

Parent Consent Form (Under Age 18) Morgan L. Schafbuch

PARENT CONSENT FORM

What are the Intrinsic Motivating Factors for Students to Enroll in Agricultural Education?

Invitation – Your child is invited to be in a research study being done by Morgan Schafbuch, a student from the University of Kentucky, Department of Community and Leadership Development. Your child was selected to participate because he/she is a student enrolled in the agricultural education program at the local high school. If you consent to volunteer, your child will be one of about 400 other participants in the study. Ms. Morgan Schafbuch and Dr. Stacy Vincent from the University of Kentucky are directing this study.

What Your Child Will Be Asked to Do - If you agree to consent your child to be in the study, he/she will be asked complete an online questionnaire, which will be taken during regularly scheduled class time. The students will be using school provided computers/iPads/laptops to complete the questionnaire. This will be a one–time visit where the questionnaire will be completed only once. The survey will take about a half hour to complete. Answers to these questions will allow us to learn why students enrolled in agricultural education, and why they choose to continue enrolling in agriculture classes.

Why You Should or Should Not Participate – You should NOT consent to have your child participate in this study if you don't want Ms. Schafbuch or Dr. Vincent to use his/her answers from your survey. By signing this form, you are allowing Ms. Schafbuch to use his/her answers from the survey as part of the study. If you consent to your child being in this study, it should be because you want to. If you choose not to allow your child to participate in the study, he/she will not lose any rights or benefits, as this survey is a research only activity, and if your student declines participation, he or she will not have to take it. Your child may withdraw from the study at any time should he/she feel uncomfortable or no longer wish to participate.

Confidentiality – If you agree to allow your child to participate, your child's answers will be pooled with answers from about 400 other students who are enrolled in agricultural education. The answers from your child's survey will be collected and stored on a password locked computer in Ms. Schafbuch's office, and the answers from the survey will be collected anonymously. We will keep confidential all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

Benefits – There is no guarantee that your child will receive any direct benefits from the research.

Who Will See the Information Your Child Gives? – The only people who will see the responses your child gives from the survey are Ms. Schafbuch and Dr. Vincent. Every effort will be made to prevent anyone who is not on the research team from knowing what information your child gave us. The answers from the survey will be kept on a password-protected computer.

Risks and Discomforts – There are no major discomforts or risks for participating in this study. If your child decides at any time he/she does not want to finish the study, he/she may stop whenever he/she wants.

What if You Have Questions - Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Morgan Schafbuch at (319) 430-6192. If you have any questions about your rights, or your child's rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky between the business hours of 8am and 5pm EST, Mon-Fri, at 859-257-9428 or toll free at 1-866-400-9428. Please sign and return one copy to the school and keep the other copy for your records.

Name of your child _____

_____ _____

Signature of Parent or Guardian Date

NOTE – Please complete and sign two copies of this form. Please keep one for yourself and give one signed copy to Ms. Schafbuch.

APPENDIX F: CONSENT FORM

CONSENT FORM

What are the Intrinsic Motivating Factors for Students to Enroll in Agricultural Education?

Invitation - You are invited to be in a research study being done by Morgan Schafbuch, a student from the University of Kentucky, Department of Community and Leadership Development. You were selected to participate because you are a student enrolled in the agricultural education program at your local high school. If you consent to volunteer, you will be one of about 400 other participants in the study. Ms. Morgan Schafbuch and Dr. Stacy Vincent from the University of Kentucky are directing this study.

What You Are Asked to Do - If you agree to be in the study, you will be asked complete an online questionnaire, which you will take during your regularly scheduled class time. You will be using school provided computers/iPads/laptops to complete the questionnaire. This will be a one–time visit where you will need to complete the questionnaire only once. The survey will take about a half hour to complete. Your answers to these questions will allow us to learn why you enrolled in agricultural education, and why you choose to continue enrolling in agriculture classes. If you choose not to participate, you will simply sit with the class while your remaining classmates complete the survey.

Why You Should or Should Not Participate – You should NOT consent to participate in this study if you don't want Ms. Schafbuch or Dr. Vincent to use your answers from your survey. By signing this form, you are allowing Ms. Schafbuch to use your answers from your survey as part of the study. If you consent to being in this study, it should be because you want to, and are serving as a volunteer. If you choose not to participate in the study, you will not lose any rights or benefits, as this survey is a research only activity, and if you decline participation, you will not have to take it. You may withdraw from the study at any time should you feel uncomfortable or no longer wish to participate.

Confidentiality – If you agree to participate, your answers will be pooled with answers from about 400 other students who are enrolled in agricultural education. The answers from your survey will be collected and stored on a password locked computer in Ms. Schafbuch's office, and the answers from the survey will be collected anonymously. We will keep confidential all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

Benefits – There is no guarantee that you will receive any direct benefits from the research.

Who Will See the Information You Give? – The only people who will see the responses you give from your survey are Ms. Schafbuch and Dr. Vincent. Every effort will be made to prevent anyone who is not on the research team from knowing what information you gave us. The answers from the survey will be kept on a password-protected computer.

Risks and Discomforts – There are no major discomforts or risks for participating in this study. If something

makes you feel bad while you are in the study, please tell Morgan Schafbuch. If you decide at any time you do not want to finish the study, you may stop whenever you want.

What if You Have Questions - You can ask Morgan Schafbuch questions any time about anything in this study. Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Morgan Schafbuch at (319) 430-6192. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky between the business hours of 8am and 5pm EST, Mon-Fri. at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

Signing this paper means that you have read this or had it read to you, and that you want to be in the study. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be mad if you do not sign this paper or even if you change your mind later. You agree that you have been told about this study and why it is being done and what to do.

_____ _____

Signature of Person Agreeing to be in the Study Date

_____ _____

Name of [Authorized] Person Obtaining Informed Assent Date

NOTE – Please complete and sign two copies of this form. Please keep one for yourself and give one signed copy to Ms. Schafbuch.

APPENDIX G: SURVEY INSTRUMENT

Jessamine High School

Q31 First and last name as appears on roster

Q1 How good are you in your agriculture class(es)?

- ❍ Above Average (1)
- ❍ Average (2)
- ❍ Below Average (3)

Q2 If you were to list all of the students in your agriculture class from best to worst, where would you put yourself?

- ❍ One of the Best (1)
- ❍ Above Average (2)
- ❍ Average (3)
- ❍ Below Average (4)
- ❍ One of the Worst (5)

Q3 Some kids are better in one subject than another. For example, you might be better in agriculture than reading. Compared to most of your other school subjects, how good are you at agriculture?

- ❍ Much Better (1)
- ❍ Better (2)
- ❍ Somewhat Better (3)
- ❍ About the Same (4)
- ❍ Somewhat Worse (5)
- ❍ Worse (6)
- ❍ Much Worse (7)

Q4 How well do you expect to do in agriculture this year?

- ❍ Excellent (1)
- ❍ Very Good (2)
- ❍ Good (3)
- ❍ Fair (4)
- ❍ Poor (5)

Q5 How good are you at learning something new in agriculture?

- ❍ Excellent (1)
- ❍ Very Good (2)
- ❍ Good (3)
- ❍ Fair (4)
- ❍ Poor (5)

Q6 In general, how useful is what you learn in agriculture?

- ❍ Very Useful (1)
- ❍ Useful (2)
- ❍ Somewhat Useful (3)
- ❍ Neutral (4)
- ❍ Somewhat Useless (5)
- ❍ Useless (6)
- ❍ Very Useless (7)

Q7 For me, being good in agriculture is...

- ❍ Extremely Important (1)
- ❍ Very Important (2)
- ❍ Somewhat Important (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Unimportant (5)
- ❍ Very Unimportant (6)
- ❍ Not at all Important (7)

Q8 In general, I find working on agriculture assignments

- ❍ Very Easy (1)
- ❍ Easy (2)
- ❍ Somewhat Easy (3)
- ❍ Neutral (4)
- ❍ Somewhat Difficult (5)
- ❍ Difficult (6)
- ❍ Very Difficult (7)

Q9 How much do you like being enrolled in agriculture?

- ❍ Like Extremely (1)
- ❍ Like Very Much (2)
- ❍ Neither Like nor Dislike (3)
- ❍ Dislike Very Much (4)
- ❍ Dislike Extremely (5)

Q10 Why did you enroll in your first agricultural education class?

Q11 What motivates you to stay enrolled in agricultural education?

Q12 To what degree does your teacher influence you to stay enrolled in agricultural education? 1 being low, 7 being high

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)

Q12a If so, how? Q12a should be answered if the participant selected “4”, “5”, ‘6”, or “7” for Q12.

Q13 To what degree do your parents influence you to stay enrolled in agricultural education? 1 being low, 7 being high

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)

Q13a If so, how? Q13a should be answered if the participant selected “4”, “5”, “6”, or “7” for Q13.

Q14 To what degree do your peers influence you to stay enrolled? 1 being low, 7 being high

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)

Q14a If so, how? Q13a should be answered if the participant selected “4”, “5”, “6”, or “7” for Q14.

Q15 Where do you see yourself five years from now?

Q16 What are your future career goals?

Q17 Do you have any affiliation with a farm?

- ❍ Live on a farm (1)
- ❍ Work on a farm (2)
- ❍ Parents own a farm, do not live on one (3)
- ❍ No affiliation to farm (4)

Q18 What is your gender?

- Male (1)
- Female (2)

Q19 What grade are you currently in?

- 8th (1)
- 9th (2)
- 10th (3)
- 11th (4)
- 12th (5)

Q20 What agriculture pathway are you in? (List)

- Agribiotechnology (1)
- Agribusiness (2)
- Agriculture Power, Structural, and Technical Systems (3)
- Animal Science (4)
- Environmental Science/Natural Resources (5)
- Food Science and Processings (6)
- Plant and Horticulture Systems (7)

Q21 Where do you rank yourself in this pathway, among your peers?

- Above Average (1)
- Average (2)
- Below Average (3)

Q22 Was this pathway an interest before enrolling in agriculture?

- Yes (1)
- No (2)

Q22a should be answered if “no” was selected for Q22.

Q22a If this pathway was not an interest previous to enrolling in agriculture, who inspired you to enroll in the pathway course(s)?

- ❍ Teacher (1)
- ❍ Parent/Guardian (2)
- ❍ Friends (3)
- ❍ Other (4)

Answer If this pathway was not an interest previous to enrolling in agriculture, who inspired you to enroll in the pathway course Other Is Selected
Q22b Explain

Q23 Why are you staying in this pathway?

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